

Remarks

These Remarks are in reply to the Office Action mailed March 28, 2006.

Claims 1-23 were pending in the Application prior to the outstanding Office Action. In the Office Action, the Examiner rejected claims 1-23. Reconsideration of the rejections is requested.

Objections to the Drawings

In item 4, on page 2, the Office Action objected to fig. 1A for failing to include block descriptions for items 104 and 105 and to fig. 1C, for failing to include a block description for item 87. Applicant has amended the drawings to overcome the objection.

Rejections under 35 U.S.C. § 101

In item 5 on page 3, claims 1-23 were provisionally rejected under 35 U.S.C. §101 as claiming the same invention as that of claims 1-26 of co-pending Application No. 10/017,701. Applicant respectfully traverses.

A statutory type double patenting rejection will not exist where the claim recites at least one embodiment that would not infringe the claim of the issued patent:

A reliable test for double patenting under 35 U.S.C. 101 is whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the patent. In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970). Is there an embodiment of the invention that falls within the scope of one claim, but not the other? If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist. (MPEP, 804(II)(A)) [emphasis added]

As is apparent from Table I below, claim 1 of the present application recites at least one embodiment that would not necessarily be infringed by an embodiment falling within the ambit of claim 1 of co-pending Application No. 10/017,701.

Table 1

Claim 1 of Application	Claim 1 of Application No. 10/017,701
1. A method, comprising:	1. A method, comprising:
receiving a first schema database comprising information having at least one of a spatial component and a remaining component;	receiving a first database;
	forming a virtual schema including at least a portion of a dataset included within the first database;
performing data analysis thereon to determine a geospatial pattern based upon the spatial component;	
	<u>receiving a first input indicating a criteria;</u>
<u>storing the geospatial pattern as meta data;</u>	
aggregating data of the database into one or more groupings in accordance with the meta data; and.	aggregating together into one or more groupings, data from the first database, based at least in part upon a spatial component of the data, in accordance with the virtual schema and the first input indicating the criteria; and
displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation	displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation

Claims 18, 19, 21 and 22 likewise recite at least one embodiment that would not necessarily be infringed by an embodiment falling within the ambit of any of the claims of the co-pending Application No. 10/017,701. Accordingly, claims 1, 18, 19, 21 and 22 of the present application are not barred from issuing in a patent by the statutory prohibition to double patenting.

Claims 2 – 17, 20 and 23 which depend from claims 1, 18, 19, 21 and 22 respectively, would necessarily incorporate the limitations of these respective independent claims, and therefore claims 2 – 17, 20 and 23 are not barred from issuing in a patent by the statutory prohibition to double patenting.

Applicant respectfully submits that the statutory double patenting rejection is obviated for at least these reasons, and respectfully requests 1) withdrawal of the rejection; and 2) allowance of the subject claims.

Rejections Under 35 U.S.C. § 103(a) over Morimoto i.v.o Du

Claims 1-5, 10, 12-19 and 21-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Morimoto et al. (U.S. Pat. No. 7,010,564) in view of Du (U.S. Pat. No. 6,732,120).

The Office Action admits that Morimoto do not disclose (1) storing the geospatial pattern as meta data; and (2) displaying one or more indicators associated with the one or more groupings, but argues that in order to provide “utilize the storing the spatial data as metadata [sic]” that “at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the displaying geographical data method of Du into the spatial data mining of Morimoto.” Applicants respectfully traverse.

A

Apparently, the Office Action’s conclusion is based upon the assumption that Du’s use of metadata to prepare multi-dimensional presentations of information in multi-dimensional forms is equivalent to the recited storing of geospatial information as metadata. (See, e.g., Office Action, page 4). If such a proposition were taken as arguendo true, then the Office Action’s conclusions would indeed be plausible.

However, Du’s application instead prepares multi-dimensional presentations of data stored in a database using metadata ALREADY stored in a repository, which Du’s

Dimension-to-Domain Server (DDS) translates to resolve requests for information that span a relational (OLTP) space at col. 3, lines 17 – 23:

According to another aspect of the present invention, the DDS comprises translation tables and metadata repositories. Using that information, the DDS can resolve a request for information that spans a relational (OLTP) space and a multi-dimensional (OLAP) space. For example, the DDS can map a given domain and values in that domain in a relational space to dimensions of a cube in a multi-dimensional (MD) space. [Emphasis added].

Du teaches “A system including a method for navigating between dimensions and domains allows for an interactive response to a query based on data stored in at least one online transaction processing (OLTP) database structure and data stored in at least one online analysis processing (OLAP) database structure (Du, Abstract).” Instead of teaching the storing of geospatial information as metadata, however, the passages of Du, cited in the Office Action (col. 6, line 40 to 54) teach instead building relation manager component (RMC):

Preferably, DDS server 30 is not constrained to follow any file-to-file relation descriptions. This job is preferably reserved to relation manager component (RMC). The RMC must know how to answer questions of the sort: “For record X of File A, what are the related records of file B?”

While embodiments of the present invention may indeed be compatible with the use of an online transactional OLAP system, such as that provided by Du, the recited claim limitations refer instead to storing the geospatial pattern as meta data – a concept completely absent in the Morimoto/Du combination. Claim 1 already clearly reflects such limitation:

1. (Original) A method, comprising:
receiving a first schema database comprising information having at least one of a spatial component and a remaining component;
performing data analysis thereon to determine a geospatial pattern based upon the spatial component;
storing the geospatial pattern as meta data;
aggregating data of the database into one or more groupings in accordance with the meta data; and
displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation.

Because the combination of Morimoto with Du lacks the recited “storing the geospatial pattern as meta data,” the asserted combination of Morimoto with Du cannot possibly teach, suggest or otherwise render obvious embodiments of claim 1. Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Morimoto and Du from further consideration as references.

B

Even if, arguendo, Du did teach such claim limitation, the asserted combination of Du and Morimoto would still fail to teach, suggest or otherwise render obvious the recited embodiments. In view of the present invention, Applicant fully agrees with the Examiner that embodiments of the invention may indeed provide for overlaying geospatial pattern stored as meta data onto an online analysis processing (OLAP) database, or modifying the Du reference to either layer or composite geospatial pattern on top of an n-dimensional presentation, however, such overlaying is NOT in the asserted Morimoto/Du combination. Because neither Morimoto nor Du, alone or in any combination teach, suggest or otherwise render obvious such storing the geospatial pattern as meta data, and because

modifications to Du to do so would change Du's principle of operation in a manner contrary to their stated purpose, the idea to do so must be drawn via impermissible hindsight from the present application.

As noted previously, Du teaches techniques for transactional On Line Analytical Processing (OLAP). Du's system is intended to provide rapid recalculation of visualizations of analyzed data in a multidimensional presentation (Du, col. 2, lines 40 - 45):

For a real-time response, the user would have to access the relational database in real-time and also request that needed aggregations be created in real time.

The creation of these aggregations in real-time would consume large amounts of computing resources and, in many cases, their creation is computationally infeasible.

Du's approach to solving this problem a Dimension-to-Domain Server (DDS) to intercept queries that involve both an OLAP element and an OLTP element to resolve an association between the elements so that a query can be formulated for an OLAP server and/or an OLTP server. (Du, col. 2, line 61 to col. 3, line 8):

For example, if an OLAP element is dragged and dropped on an OLTP element, the client queries an association server, or more specifically a dimension-to-domain server (DDS), which responds with an association of the OLAP element to suitable OLTP elements to allow an OLTP query to be generated where a response to such an OLTP query would appear to the user to be responsive to the drag and drop operation.

Because Du's system is intended to provide rapid response to queries made using OLAP and OLTP elements, modifying their system to include geospatial metadata storing techniques (wastes time, adds steps) or layering or compositing geospatial pattern(s) on top of an n-dimensional presentation (wastes space, requires larger database) would require modifications to Du's purpose as well as Du's principle of operation to do so

because such modifications would NECESSARILY slow Du's system contrary to their stated purpose: the rapid response to queries made using OLAP and OLTP elements. Therefore, the idea to so modify Du must be drawn via impermissible hindsight from the present application.

The rejection is improper and should be withdrawn for at least this reason as well.

C

The Office Action admits that Morimoto do not disclose the recited, "displaying one or more indicators associated with the one or more groupings," on page 4. Because Du's OLAP based system contemplates display of database information in multi-dimensional cubes (Du, col. 2, lines 19 – 29: "a user is presented with a user interface at an OLAP client and uses that OLAP client to "navigate" a set of "cubes" (the multi-dimensional, or "MD" data structure) that were created from the OLTP data structures."), Du not only fails to teach the recited "displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation," Du actually teaches away.

D

Because Morimoto's approach contemplates use of an input objective function to produce "map bucket" results for display with a Geographical Information System (GIS) (Morimoto, Abstract, Figs. 4A – 4B), the incorporation of Du's OLAP based system that contemplates display of database information in multi-dimensional cubes (Du, col. 2, lines 19 – 29) would render Morimoto inoperable or unfit for its present purpose.

Claims 18, 19, 21 and 22

Amended claims 18, 19, 21 and 22, while independently patentable, are also patentable for the same reasons described above with respect to Claim 1. Therefore, based on at least the reasons stated above with respect to Claim 1, the applicant respectfully submits that Claims 18, 19, 21 and 22 are patentable over Morimoto and Du.

Claims 2 – 17, 20 and 23

Claims 2 – 17, 20 and 23 are dependent claims depending directly or indirectly from claims 1, 18, 19, 21 and 22. Therefore claims 2 – 17, 20 and 23 are patentable over Morimoto and Du for at least the same reasons that claims 1, 18, 19, 21 and 22 are patentable over Morimoto and Du.

Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Du from further consideration as a reference.

Rejections Under 35 U.S.C. § 103(a) over Morimoto i.v.o Du and further i.v.o Gonzales

Claims 6-7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Morimoto and Du in view of Gonzales, "Seeking Spatial Intelligence."

The Office Action argues that, "at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the Geographic Information System (GIS) of Gonzales into the displaying geographical data method of Du and the spatial data mining of Morimoto to utilize the storing the spatial data as metadata [sic]."

Applicants respectfully traverse.

Gonzales fails to remedy the faults of Morimoto and Du with regard to failing to teach, suggest or otherwise render obvious the recited embodiments recited by claim 1. Since claims 6 through 7 depend directly or indirectly from claim 1, claims 6 through 7 are patentable over Morimoto, Du and Gonzales for at least the same reasons that claim 1 is patentable over Morimoto, Du and Gonzales.

Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Gonzales from further consideration as a reference.

Rejections Under 35 U.S.C. § 103(a) over Morimoto i.v.o Du i.v.o Gonzales and further i.v.o. Leipnik

Claims 8-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Morimoto and Du in view of Gonzales, and further in view of Leipnik et al., "Coordinates of a Killer."

The Office Action argues that “at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the Geographic Information System (GIS) of Leipnik into the Geographic Information System (GIS) of Gonzales and to the displaying geographical data method of Du and the spatial data mining of Morimoto to utilize the storing the spatial data as metadata [sic].”

Applicants respectfully traverse.

Leipnik fails to remedy the faults of Morimoto, Du and Gonzales with regard to failing to teach, suggest or otherwise render obvious the recited embodiments of claim 1. Since claims 8 – 9 depend either directly or indirectly from claim 1, claims 8 - 9 are patentable over Morimoto, Du, Gonzales and Leipnik for at least the same reasons that claim 1 is patentable over Morimoto, Du, Gonzales and Leipnik.

Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Leipnik from further consideration as a reference in the instant case.

Rejections Under 35 U.S.C. § 103(a) over Morimoto in view of Du and Agassi

In item 10 on pages 14 - 16, claims 11 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Morimoto and Du in view of Agassi et al. (U.S. Pat. No. 6,480,842).

The Office Action argues that, “at the time invention was made, it would have been obvious to a person of ordinary skill in the art to combine the Online Analysis Processing (OLAP) database structure of Agassi into the displaying geographical data method of Du and the spatial data mining of Morimoto to utilize the storing the spatial data as metadata.”

Applicants respectfully traverse.

Agassi’s web based report tool for telecommunications data warehousing fails to remedy the flaws of Morimoto and Du with regard to failing to teach, suggest or otherwise render obvious claims 1 and 19 described above.

Since claims 11 and 20 are dependent claims depending either directly or indirectly from claims 1 and 19, claims 11 and 20 are patentable over Morimoto, Du and Agassi for at least the same reasons that claims 1 and 19 are patentable over Morimoto, Du and Agassi.

Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Agassi from further consideration as a reference in the instant case.

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: JUNE 28, 2006

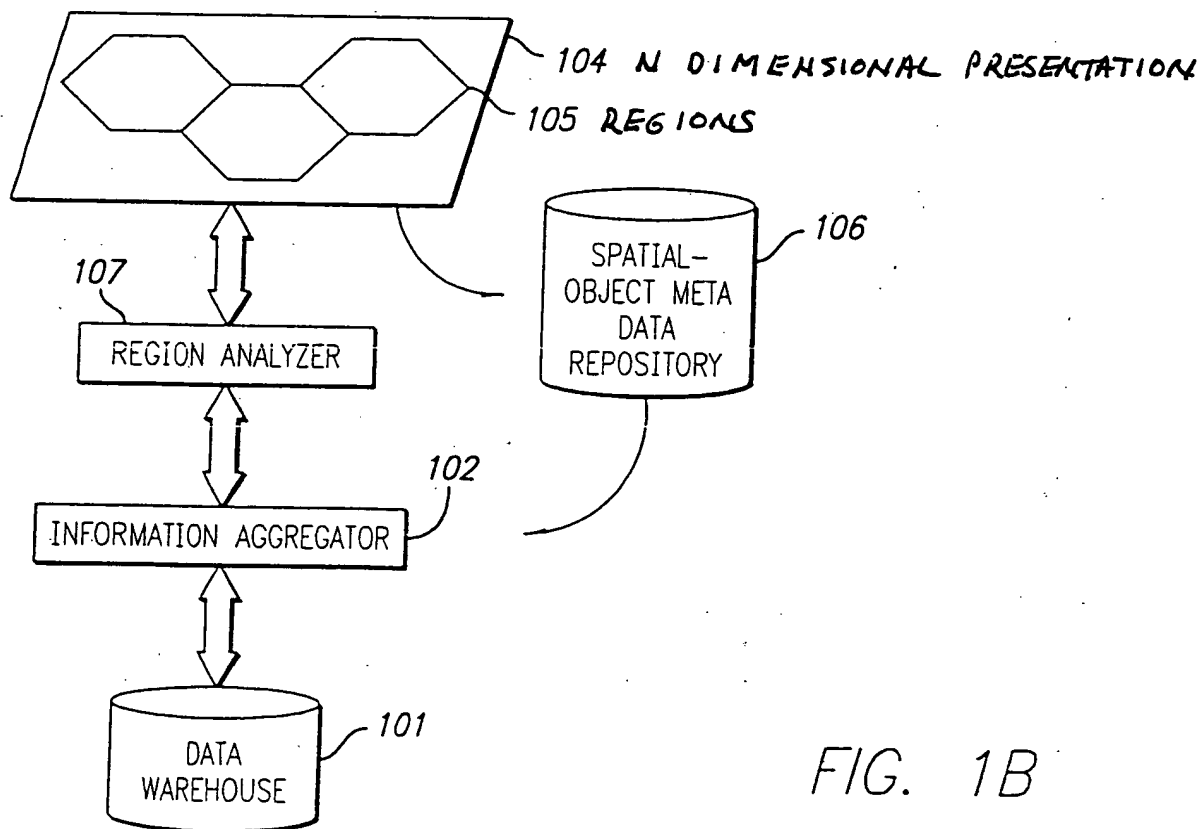
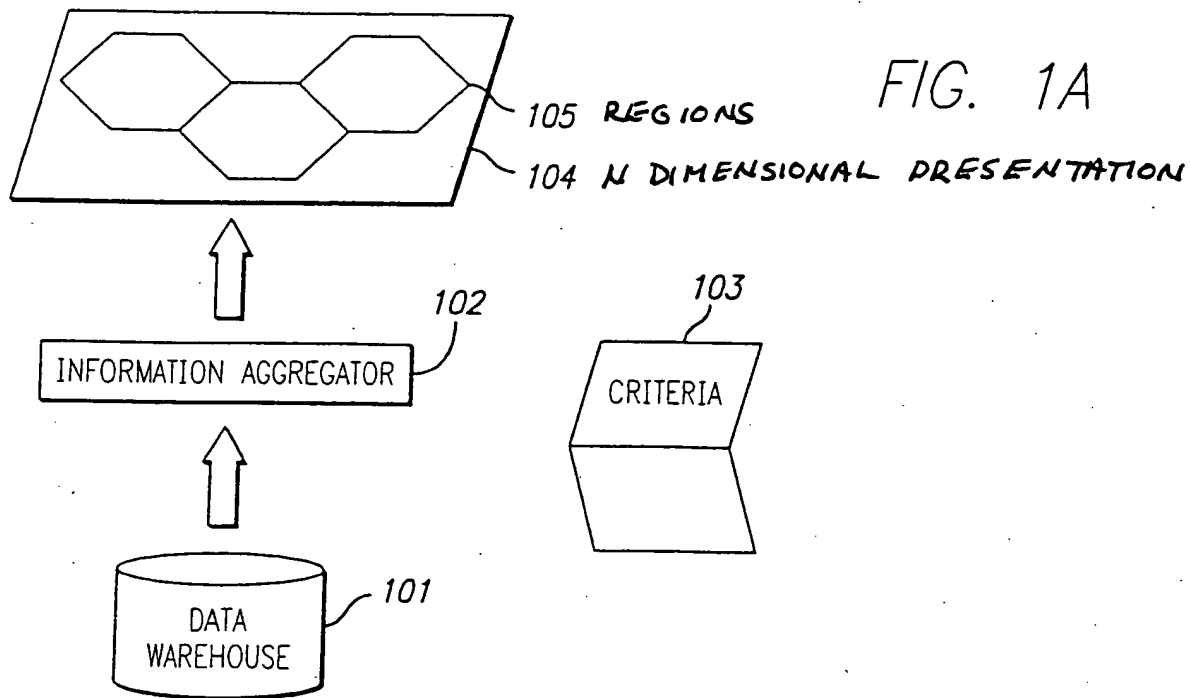
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In the Drawings:

Enclosed are replacement sheets for Figs. 1A, 1B and 1C. Subject to the approval of the Examiner, it is respectfully requested that the new drawing sheets be substituted for the originally filed drawing sheets for Figs. 1A, 1B and 1C. Extra copies of the original drawing sheets with changes indicated in red, are also attached.



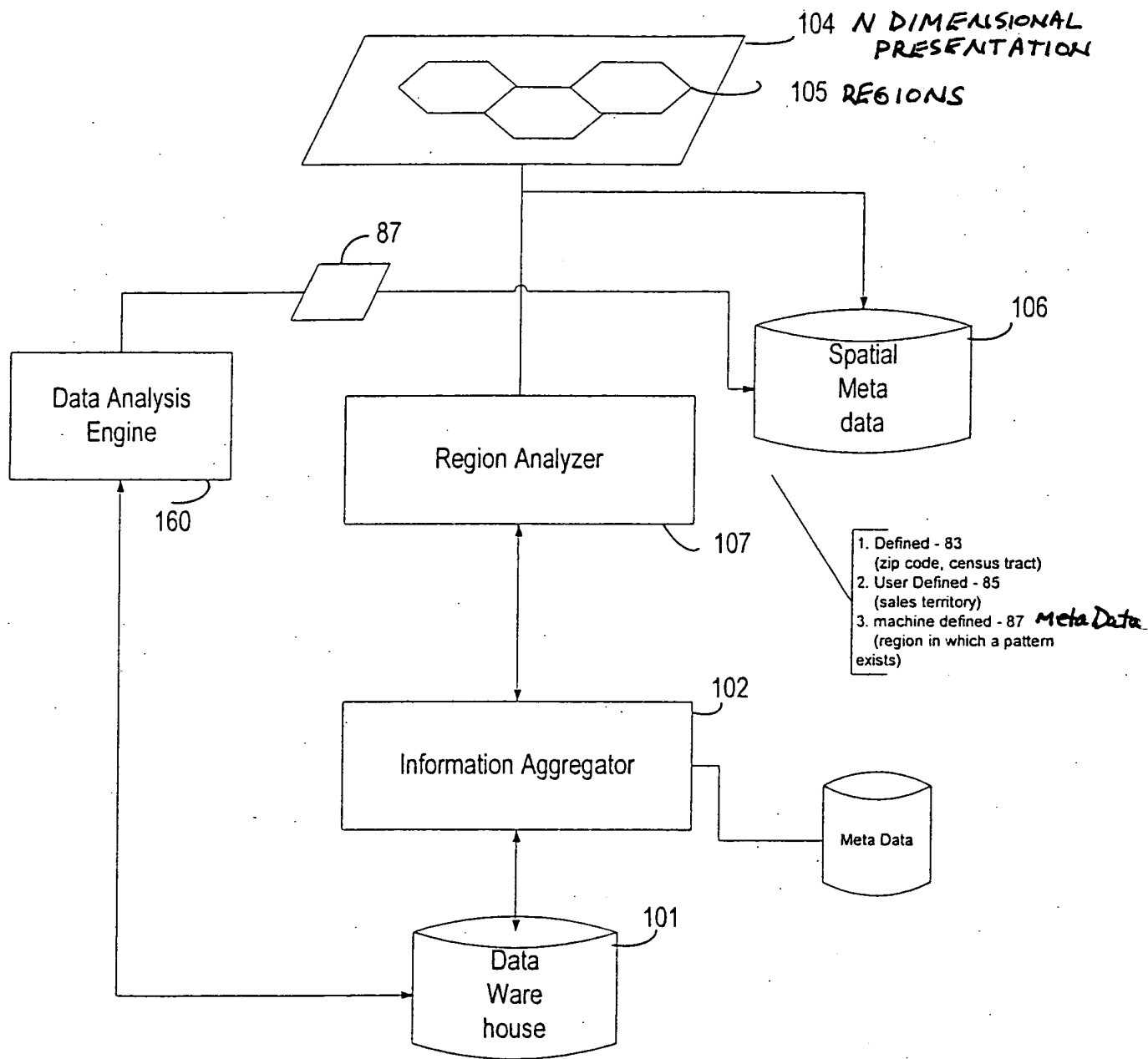


Fig. 1C